

AUTOFLUORESCENCE IMAGING SYSTEM FOR ENDOSCOPY

ABSTRACT OF THE DISCLOSURE

A system and method for imaging tissue autofluorescence through a video endoscope is described, comprising a light source capable of providing both ultraviolet
5 light capable of inducing tissue autofluorescence and visible light which induces little or no autofluorescence, an optical system to deliver both wavelength bands to the tissue with the same apparent spatial and angular intensity distribution, a means for digitally acquiring the resulting, visible fluorescence and visible reflectance images using a single imaging detector at the distal tip of the endoscope and a means for digitally
10 processing said images to generate a final, false-color image for display which indicates regions of tissue dysplasia. This system can either be added on to an existing video endoscope or integrated into its structure. The combined system can be electronically switched between normal white light imaging and fluorescence imaging.